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NEWS	1		Web Page for STN Seminar Schedule - N. America
NEWS	2	AUG 10	Time limit for inactive STN sessions doubles to 40 minutes
NEWS	3	AUG 18	COMPENDEX indexing changed for the Corporate Source (CS) field
NEWS	4	AUG 24	ENCOMPLIT/ENCOMPLIT2 reloaded and enhanced
NEWS	5	AUG 24	CA/CAPLUS enhanced with legal status information for U.S. patents
NEWS	6	SEP 09	50 Millionth Unique Chemical Substance Recorded in CAS REGISTRY
NEWS	7	SEP 11	WPIDS, WPINDEX, and WPIX now include Japanese FTERM thesaurus
NEWS	8	OCT 21	Derwent World Patents Index Coverage of Indian and Taiwanese Content Expanded
NEWS	9	OCT 21	Derwent World Patents Index enhanced with human translated claims for Chinese Applications and Utility Models
NEWS	10	NOV 23	Addition of SCAN format to selected STN databases
NEWS	11	NOV 23	Annual Reload of IFI Databases
NEWS	12	DEC 01	FRFULL Content and Search Enhancements
NEWS	13	DEC 01	DGENE, USGENE, and PCTGEN: new percent identity feature for sorting BLAST answer sets
NEWS	14	DEC 02	Derwent World Patent Index: Japanese FI-TERM thesaurus added
NEWS	15	DEC 02	PCTGEN enhanced with patent family and legal status display data from INPADOCDB
NEWS	16	DEC 02	USGENE: Enhanced coverage of bibliographic and sequence information
NEWS	17	DEC 21	New Indicator Identifies Multiple Basic Patent Records Containing Equivalent Chemical Indexing in CA/CAPLUS

NEWS EXPRESS MAY 26 09 CURRENT WINDOWS VERSION IS V8.4,  
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FILE 'HOME' ENTERED AT 15:58:30 ON 24 DEC 2009

=> File MEDLINE, SCISEARCH, LIFESCI, BIOSIS, EMBASE, HCAPLUS, NTIS, ESBIODBASE,  
BIOTECHNO, WPIDS

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FULL ESTIMATED COST	1.10	1.10

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=> S (ompt protease or protease VII)  
L1 302 (OMPT PROTEASE OR PROTEASE VII)

=> S P1 (P) P1'  
MISMATCHED QUOTE 'P1'  
Quotation marks (or apostrophes) must be used in pairs,  
one before and one after the expression you are setting  
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=> S P1 (P) (P1')  
MISMATCHED QUOTE 'P1')'  
Quotation marks (or apostrophes) must be used in pairs,  
one before and one after the expression you are setting  
off or masking.

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=> S P1 (P) "P1'"
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FIELD CODE - 'AND' OPERATOR ASSUMED 'P1 (P) "P1'"
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FIELD CODE - 'AND' OPERATOR ASSUMED 'P1 (P) "P1'"
L2      194244 P1 (P) "P1'"

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L3      19 L1 AND L2

=> s l3 and P3
L4      4 L3 AND P3

=> duplicate
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DUPLICATE PREFERENCE IS 'HCAPLUS, WPIDS'
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PROCESSING COMPLETED FOR L4
L5      3 DUPLICATE REMOVE L4 (1 DUPLICATE REMOVED)

=> d l5 1-3 bib ab

L5      ANSWER 1 OF 3 HCAPLUS  COPYRIGHT 2009 ACS on STN
AN      2007:92182 HCAPLUS
DN      146:332984
TI      Substrate specificity of the Escherichia coli outer membrane protease OmpP
AU      Hwang, Bum-Yeol; Varadarajan, Navin; Li, Haixin; Rodriguez, Sarah;
        Iverson, Brent L.; Georgiou, George
CS      Institute for Cellular and Molecular Biology, University of Texas, Austin,
        TX, 78712, USA
SO      Journal of Bacteriology (2007), 189(2), 522-530
        CODEN: JOBAAY; ISSN: 0021-9193
PB      American Society for Microbiology
DT      Journal
LA      English
AB      Escherichia coli OmpP is an F episome-encoded outer membrane protease that
        exhibits 71% amino acid sequence identity with OmpT. These two enzymes
        cleave substrate polypeptides primarily between pairs of basic amino
        acids. We found that, like OmpT, purified OmpP is active only in the
        presence of lipopolysaccharide. With optimal peptide substrates, OmpP
        exhibits high catalytic efficiency (kcat/Km = 3.0+106 M-1 s-1).
        Anal. of the extended amino acid specificity of OmpP by substrate phage
        revealed that both Arg and Lys are strongly preferred at the P1
        and P1' sites of the enzyme. In addition, Thr, Arg, or Ala is
        preferred at P2; Leu, Ala, or Glu is preferred at P4; and Arg is preferred
        at P3'. Notable differences in OmpP and OmpT specificities
        include the greater ability of OmpP to accept Lys at the P1 or
        P1', site as well as the prominence of Ser at P3 in OmpP
        substrates. Likewise, the OmpP P1 site could better accommodate
        Ser; as a result, OmpP was able to cleave a peptide substrate between
        Ser-Arg about 120 times more efficiently than was OmpT. Interestingly,
        OmpP and OmpT cleave peptides with three consecutive Arg residues at
        different sites, a difference in specificity that might be important in
        the inactivation of cationic antimicrobial peptides. Accordingly, we show
        that the presence of an F' episome results in increased resistance to the
        antimicrobial peptide protamine both in ompT mutants and in wild-type E.
        coli cells.

OSC.G   7      THERE ARE 7 CAPLUS RECORDS THAT CITE THIS RECORD (7 CITINGS)
RE.CNT  39     THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

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## ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN DUPLICATE 1  
 AN 2005:300594 HCAPLUS  
 DN 142:368184  
 TI Production of biol. active polypeptides by the proteolysis of recombinant synthetic polypeptide precursors by the OmpT protease variants  
 IN Okuno, Kazuaki; Yabuta, Masayuki  
 PA Daiichi Suntory Pharma Co., Ltd., Japan  
 SO PCT Int. Appl., 107 pp.  
 CODEN: PIXXD2  
 DT Patent  
 LA Japanese  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005030956	A1	20050407	WO 2004-JP14704	20040929
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	AU 2004276687	A1	20050407	AU 2004-276687	20040929
	CA 2540446	A1	20050407	CA 2004-2540446	20040929
	EP 1674567	A1	20060628	EP 2004-773628	20040929
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	BR 2004014611	A	20061107	BR 2004-14611	20040929
	CN 1860226	A	20061108	CN 2004-80028525	20040929
	KR 2006089724	A	20060809	KR 2006-705984	20060327
	US 20070077617	A1	20070405	US 2006-573821	20060328
PRAI	JP 2003-342183	A	20030930		
	WO 2004-JP14704	W	20040929		

## ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB The proteolytic method for producing biol. active polypeptides (ACTH (1-24), motilin or calcitonin) from recombinant synthetic precursor polypeptides or fusion proteins by using OmpT protease mutants has been developed. The synthetic precursor polypeptides or fusion proteins (22 .apprx. 45 a.a. (amino acid)) have been designed according to the substrate specificities of the OmpT protease mutants. Synthetic substrate polypeptides have Arg or Lys at P1 site and the a.a. other than Asp, Glu or Pro at the P1' site. The substrate polypeptides have one, two or serial three basic a.a. in the P10 .apprx. P3, P10 .apprx. P3' or P10 .apprx. P5' (more specifically in the P5 .apprx. P3 site), however the sites P6 and P4 are excluded if only one basic a.a. in the sequence. The fusion protein substrates with protection peptide having C-terminal Arg or Lys have N-terminal a.a. such as Phe, Ala, Ser, Cys or Tyr and the other a.a. excluding Asp, Glu and Pro. These preferred P5 .apprx. P1 sequence and P7 .apprx. P1 sequence in the synthetic precursor polypeptides or fusion proteins are Arg-Arg-Arg-Ala-Arg and Asp-Ala-Arg-Arg-Arg-Ala-Arg, resp. Introduction of acidic a.a. typically Asp to the P3 site can repress the digestion by the OmpT proteases. The OmpT protease

variants that can be used in the proteolysis system have a.a variation at the 97th position. The 97th a.a. is Leu, Met or His and the other a.a. including Ala, Phe, Ser, Thr, Cys, Asn, Gln, and Glu. The vector encoding the fusion substrate protein containing human glucagon, motilin, ACTH or calcitonin was designed to satisfy the structural condition claimed above and expressed in the inclusion body of E. coli and the cleaving of biol. active peptides from the substrate fusion proteins by the recombinant OmpT protease variant was demonstrated. The performance of the coexpression system of the substrate fusion protein and OmpT protease variant in the biol. active peptide generation was also demonstrated.

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2009 ACS on STN

AN 2004:734580 HCAPLUS

DN 141:390901

TI Substrate specificity of the Escherichia coli outer membrane protease OmpT  
AU McCarter, John D.; Stephens, Daren; Shoemaker, Kevin; Rosenberg, Steve;  
Kirsch, Jack F.; Georgiou, George

CS Department of Molecular and Cell Biology, University of California,  
Berkeley, CA, USA

SO Journal of Bacteriology (2004), 186(17), 5919-5925  
CODEN: JOBAAY; ISSN: 0021-9193

PB American Society for Microbiology

DT Journal

LA English

AB OmpT is a surface protease of gram-neg. bacteria that has been shown to cleave antimicrobial peptides, activate human plasminogen, and degrade some recombinant heterologous proteins. We have analyzed the substrate specificity of OmpT by two complementary substrate filamentous phage display methods: (i) in situ cleavage of phage that display protease-susceptible peptides by Escherichia coli expressing OmpT and (ii) in vitro cleavage of phage-displayed peptides using purified enzyme. Consistent with previous reports, OmpT was found to exhibit a virtual requirement for Arg in the P1 position and a slightly less stringent preference for this residue in the P1' position (P1 and P1' are the residues immediately prior to and following the scissile bond). Lys, Gly, and Val were also found in the P1' position. The most common residues in the P2' position were Val or Ala, and the P3 and P4 positions exhibited a preference for Trp or Arg. Synthetic peptides based upon sequences selected by bacteriophage display were cleaved very efficiently, with kcat/Km values up to  $7.3 \times 10^6 \text{ M}^{-1} \text{ s}^{-1}$ . In contrast, a peptide corresponding to the cleavage site of human plasminogen was hydrolyzed with a kcat/Km almost 106-fold lower. Overall, the results presented in this work indicate that in addition to the P1 and P1' positions, addnl. amino acids within a six-residue window (between P4 and P2') contribute to the binding of substrate polypeptides to the OmpT binding site.

OSC.G 19 THERE ARE 19 CAPLUS RECORDS THAT CITE THIS RECORD (19 CITINGS)

RE.CNT 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> s (asp97 or d97 or (apartic acid near2 "97"))

L6 424 (ASP97 OR D97 OR (APARTIC ACID NEAR2 "97"))

=> s 16 (P) 11

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FIELD CODE - 'AND' OPERATOR ASSUMED 'L52 (P) L7'

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FIELD CODE - 'AND' OPERATOR ASSUMED 'L54 (P) L9'  
L7 4 L6 (P) L1

=> s l6 and l1  
L8 4 L6 AND L1

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DUPLICATE PREFERENCE IS 'SCISEARCH, BIOSIS, EMBASE, HCAPLUS'  
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):n  
PROCESSING COMPLETED FOR L8  
L9 1 DUPLICATE REMOVE L8 (3 DUPLICATES REMOVED)

=> d l9 bib ab

L9 ANSWER 1 OF 1 SCISEARCH COPYRIGHT (c) 2009 The Thomson Corporation on  
STN DUPLICATE 1  
AN 2004:92146 SCISEARCH  
GA The Genuine Article (R) Number: 763RY  
TI Utilization of Escherichia coli outer-membrane endoprotease OmpT variants  
as processing enzymes for production of peptides from designer fusion  
proteins  
AU Okuno K (Reprint)  
CS Daiichi Suntory Pharma Co Ltd, Inst Med Res & Dev, 2716-1 Kurakake, Gunma  
3700503, Japan (Reprint)  
AU Yabuta M; Ooi T; Kinoshita S  
CS Daiichi Suntory Pharma Co Ltd, Inst Med Res & Dev, Gunma 3700503, Japan;  
Hokkaido Univ, Grad Sch Engn, Div Mol Chem, Kita Ku, Sapporo, Hokkaido,  
Japan  
CYA Japan  
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, (JAN 2004) Vol. 70, No. 1, pp.  
76-86.  
ISSN: 0099-2240.  
PB AMER SOC MICROBIOLOGY, 1752 N ST NW, WASHINGTON, DC 20036-2904 USA.  
DT Article; Journal  
LA English  
REC Reference Count: 30  
ED Entered STN: 6 Feb 2004  
Last Updated on STN: 6 Feb 2004  
\*ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS\*  
AB Escherichia coli outer-membrane endoprotease OmpT has suitable  
properties for processing fusion proteins to produce peptides and  
proteins. However, utilization of this protease for such production has  
been restricted due to its generally low cleavage efficiency at Arg (or  
Lys)-Xaa, where Xaa is a nonbasic N-terminal amino acid of a target  
polypeptide. The objective of this study was to generate a specific and  
efficient OmpT protease and to utilize it as a  
processing enzyme for producing various peptides and proteins by  
converting its substrate specificity. Since OmpT Asp(97) is proposed to  
interact with the P1' amino acid of its substrates, OmpT variants with  
variations at Asp97 were constructed by replacing this amino  
acid with 19 natural amino acids to alter the cleavage specificity at Arg  
(P1)-Xaa (P1'). The variant OmpT that had a methionine at this position,  
but not the wild-type OmpT, efficiently cleaved a fusion protein  
containing the amino acid sequence -Arg-Arg-ArgAla-Arg down arrow motilin,  
in which motilin is a model peptide with a phenylalanine at the N  
terminus. The OmpT variants with leucine and histidine at position 97  
were useful in releasing human adrenocorticotrophic hormone (1-24) (serine  
at the N terminus) and human calcitonin precursor (cysteine at the N

terminus), respectively, from fusion proteins. Motilin was produced by this method and was purified up to 99.0% by two chromatographic steps; the yield was 160 mg/liter of culture. Our novel method in which the OmpT variants are used could be employed for production of various peptides and proteins.

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